IN THE CLAIMS:

Please amend claims 41, 49, 64-71 and 77 as follows:

1-40.   (Previously Canceled)

41.   (Currently Amended) An enhanced VSB transmitter for transmitting main data and supplemental data comprising:

a pre-interleaver for pre-interleaving the supplemental data according to first parameters;

a first multiplexer for multiplexing the main data and the pre-interleaved supplemental data;

a main interleaver for [[main-]]interleaving the multiplexed data according to second parameters; and

a data format converter for formatting the ~~main-interleaved data~~ multiplexed data interleaved by the main interleaver for transmission and transmitting the formatted data to one or more VSB receivers.

42.   (Previously Added) The enchanced VSB transmitter of claim 41, wherein the pre-interleaver is a convoulutional interleaver, and the first parameters are B1 branches and M1 bytes of unit memory.

43.   (Previously Added) The enchanced VSB transmitter of claim 42, wherein the pre-interleaver is a convoulutional interleaver, and the second parameters are B2 branches and M2 bytes of unit memory.

44.   (Previously Added) The enchanced VSB transmitter of claim 43, wherein the B1 and M1 of the first paramenter and the B2 and M2 of the second paramenter are equal.

45.   (Previously Added) The enchanced VSB transmitter of claim 43, wherein the B1 and M1 of the first paramenter and the B2 and M2 of the second paramenter are different.

46.   (Previously Added) The enhanced VSB transmitter of claim 41, further comprising a first forward error correction (FEC) coder for coding the supplemental data and outputting the first FEC coded supplemental data to the VSB pre-interleaver.

47.   (Previously Added) The enhanced VSB transmitter of claim 46, wherein the first FEC coder is a Reed-Solomon coder.

48.   (Previously Added) The enhanced VSB transmitter of claim 47, wherein the supplemetal data comprises X bytes and the Reed-Solomon coder provides Y parity bytes, wherein a total of X and Y bytes is 184 bytes.

49.   (Currently Amended) The enhanced VSB transmitter of claim 41, further comprising:

a null data inserter for inserting $\underline{a}$ ~~the~~ plurality of null bits into the pre-interleaved supplemental data, and

a header inserter for inserting a header into the supplemental data having the plurality of null bits.

50.   (Previously Added) The enhanced VSB transmitter of claim 49, wherein the null data inserter inserts the plurality of null bits into each pre-interleaved supplemental data in a predetermined order.

51.   (Previously Added) The enhanced VSB transmitter of claim 50, wherein the plurality of null bits are arranged at alternating positions within each pre-interleaved supplemental data.

52.   (Previously Added) The enhanced VSB transmitter of claim 49, wherein the plurality of null bits are "0".

52.   (Previously Added) The enhanced VSB transmitter of claim 49, wherein the header inserter adds three bytes of header information to the supplemental data having the plurality of null bits, wherein the header information contains program identification.

54.   (Previously Added) The enhanced VSB transmitter of claim 41, wherein the first multiplexer multiplexes the main data and the supplemental data according to a predetermined multiplexing information.

55.   (Previously Added) The enhanced VSB transmitter of claim 54, wherein the predetermined multiplexing information is inserted in a reserved area of a field synchronizing signal or a data segment of the supplemental data.

56.   (Previously Added) The enhanced VSB transmitter of claim 54, wherein the predetermined multiplexing information comprises at least one of a multiplexing ratio and unit.

57.   (Previously Added) The enhanced VSB transmitter of claim 56, wherein the multiplexing unit and the multiplexing ratio are predetermined based on amounts of the main data and the supplemental data.

Attorney Docket No. 2080-3023C2

58. (Previously Added) The enhanced VSB transmitter of claim 56, wherein the multiplexing ratio of the supplemental data to the main data in the first multiplexer is one to one.

59. (Previously Added) The enhanced VSB transmitter of claim 56, wherein the multiplexing ratio of the supplemental data and the main data in the first multiplexer is one to three.

60. (Previously Added) The enhanced VSB transmitter of claim 41, wherein the first multiplexer is responsive to a field synchronizing signal used for synchronizing a data frame of the data format converter.

61. (Previously Added) The enhanced VSB transmitter of claim 41, wherein one field of the multiplexed data has 312 data segments and one field synchronizing segment.

62. (Previously Added) The enhanced VSB transmitter of claim 41, wherein the main data is MPEG data.

63. (Previously Added) The enhanced VSB transmitter of claim 41, further comprising:

a data randomizer for randomizing the multiplexed data; and

a Reed-Solomon coder for coding the randomized data.

64. (Currently Amended) The enhanced VSB transmitter of claim 41, further comprising a Trellis coder for converting the ~~main interleaved data~~ multiplexed data interleaved by the main interleaver into symbols.

65.   (Currently Amended) The enhanced VSB transmitter of claim 41, wherein the data format converter comprises:

a second multiplexer for multiplexing the ~~main-interleaved data~~ multiplexed data interleaved by the main interleaver with a field synchronizing signal and segment synchronizing signals;

a pilot inserter for inserting pilot signals into the ~~multiplexed~~ data multiplexed by the second multiplexer;

a modulator for modulating the symbol data having the pilot signals into a signal of an intermediate frequency band; and

a RF (Radio Frequency) converter for converting the modulated signal into a RF band signal for transmission.

66.   (Currently Amended) A method of transmitting main data and supplemental data, the method comprising:

pre-interleaving the supplemental data according to first parameters;

multiplexing main data and the pre-interleaved supplemental data;

[[main-]]interleaving the multiplexed data according to second parameters;

formatting the [[main-]]interleaved multiplexed data for transmission; and

transmitting the formatted data to one or more VSB receivers.

67.   (Currently Amended) The method of claim ~~64~~ 66, wherein the first parameters are B1 branches and M1 bytes of unit memory.

68.   (Currently Amended) The method ~~enchanced VSB transmitter~~ of claim 67, wherein the second parameters are B2 branches and M2 bytes of unit memory.

Attorney Docket No. 2080-3023C2

69.   (Currently Amended) The <u>method</u> ~~enchanced VSB transmitter~~ of claim 68, wherein the B1 and M1 of the first paramenter and the B2 and M2 of the second paramenter are equal.

70.   (Currently Amended) The <u>method</u> ~~enchanced VSB transmitter~~ of claim 68, wherein the B1 and M1 of the first paramenter and the B2 and M2 of the second paramenter are different.

71.   (Currently Amended) The method of claim 66, further comprising:

subjecting the supplemental data to a Reed-Solomon coding by adding Reed-Solomon parity data to the ~~Reed-Solomon-coded~~ supplemental data; and

outputting the <u>Reed-Solomon</u> coded supplemental data for pre-interleaving ~~the coded supplemental data~~.

72.   (Previously Added) The method of claim 71, wherein an amount of the added Reed-Solomon parity data varies with an amount of the supplemental data.

73.   (Previously Added) The method of claim 66, further comprising:

expanding the pre-interleaved supplemental data by inserting null data into the pre-interleaved supplemental data; and

adding headers to the expanded supplemental data.

74.   (Previously Added) The method of claim 73, wherein the null data is arranged at alternating positions within the pre-interleaved supplemental data.

75.   (Previously Added) The method of claim 73, wherein each header comprises an identification code identifying the expanded supplemental data.

76.   (Previously Added) The method of claim 66, further comprising:

randomizing the multiplexed data; and

performing Reed-Solomon coding to the randomized data.

77.   (Currently Amended) The method of claim 66, further comprising:

converting the [[main-]]interleaved multiplexed data into symbols; and

outputting the converted symbols for formatting the converted symbols.

Attorney Docket No. 2080-3023C2